```
SECTANCE LISTING
<110> THE REGENTS OF THE ULTRANS
WASHINGTON DENTAL SERVICE
                       ee un zazksity of california
      Shi, Wenyuan
      Anderson, Maxwell
      Morrison, Sherie
      Trinh, Kham
      Wims, Letitia
      Chen, Li
<120> Fusion Proteins for Targeted Delivery of Antimicrobial Peptides
<130> 22851-033
<140> US 09/910,358
<141> 2001-07-10
<150> US 09/378,577
<151> 1999-08-20
<160> 15
<170> PatentIn version 3.1
<210>
<211>
       563
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthesized using sequential PCR techniques
<220>
<221> CDS
<222> (69)..(140)
<223> Histatin 5
<220>
<221> CDS
<222> (141)..(188)
<223> Linker Peptide
<220>
<221> CDS
      (189)..(563)
<222>
<223> VH of SWLA3
                                                                       60
ggatatccac catggacttc gggttgagct tggttttcct tgtccttact ttaaaaggtg
tecagtgt gat age cae get aag egg cae cae gga tat aag egg aag tte
                                                                      110
         Asp Ser His Ala Lys Arg His His Gly Tyr Lys Arg Lys Phe
                                                                      158
cac gag aag cac cac teg cac aga gga tac tet ggt gge ggt ggc teg
His Glu Lys His His Ser His Arg Gly Tyr Ser Gly Gly Gly Ser
                                                                      206
qqc qqa ggt ggg tcg ggt ggc gga tcc gac gtg aag ctt gtg gag
Gly Gly Gly Ser Gly Gly Gly Ser Asp Val Lys Leu Val Glu
```

35

1

tct ggg gga ggc tta gtg aac cct gga ggg tcc ctg aaa ctc tcc tgt Ser Gly Gly Leu Val Asn Pro Gly Gly Ser Leu Lys Leu Ser Cys 50 55 60	254
gca gcc tct gga ttc act ttc agt agc tat acc atg tct tgg gtt cgc Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr Thr Met Ser Trp Val Arg 65 70 75	302
cag act ccg gag aag agg ctg gag tgg gtc gca tcc att agt agt ggt Gln Thr Pro Glu Lys Arg Leu Glu Trp Val Ala Ser Ile Ser Ser Gly 80 85 90	350
ggt act tac acc tac tat cca gac agt gtg aag ggc cga ttc acc atc Gly Thr Tyr Thr Tyr Pro Asp Ser Val Lys Gly Arg Phe Thr Ile 95 100 105 110	398
tcc aga gac aat gcc aag aac acc ctg tac ctg caa atg acc agt ctg Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr Leu Gln Met Thr Ser Leu 115 120 125	446
aag tot gag gac aca goo atg tat tac tgt toa aga gat gac ggo too Lys Ser Glu Asp Thr Ala Met Tyr Tyr Cys Ser Arg Asp Asp Gly Ser 130 135 140	494
tac ggc tcc tat tac tat gct atg gac tac tgg ggt caa gga acc tca Tyr Gly Ser Tyr Tyr Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser 145 150 155	542
gtc acc gtc tct tca gct agc Val Thr Val Ser Ser Ala Ser 160 165	563
<210> 2 <211> 24 <212> PRT <213> Artificial Sequence	
<220> <223> Synthesized using sequential PCR techniques	
<pre><400> 2 Asp Ser His Ala Lys Arg His His Gly Tyr Lys Arg Lys Phe His Glu 1 5 10 15</pre>	
Lys His His Ser His Arg Gly Tyr 20	
<210> 3 <211> 16 <212> PRT <213> Artificial Sequence	
<220> <223> Synthesized using sequential PCR techniques	
<400> 3	

Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser 1 5 10 15

<210> 4

<211> 125

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthesized using sequential PCR techniques

<400> 4

Asp Val Lys Leu Val Glu Ser Gly Gly Gly Leu Val Asn Pro Gly Gly 1 5 10 15

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr 20 25 30

Thr Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
35 40 45

Ala Ser Ile Ser Ser Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr 65 70 75 90

Leu Gln Met Thr Ser Leu Lys Ser Glu Asp Thr Ala Met Tyr Tyr Cys 85 90 95

Ser Arg Asp Asp Gly Ser Tyr Gly Ser Tyr Tyr Tyr Ala Met Asp Tyr 100 105 110

Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Ser 115 120 125

<210> 5

<211> 533

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized using squential PCR techniques

<220>

<221> CDS

<222> (69)..(110)

<223> Dhvar 1

<220>

```
<221> CDS
<222>
       (111) . . (158)
      Linker Peptide
<220>
<221>
      CDS
      (159)..(533)
<222>
<223> VH of SWLA3
<400> 5
ggatatccac catggacttc gggttgagct tggttttcct tgtccttact ttaaaaggtg
tocagtgt aag cgg ctg ttt aag gag ctc aag ttc agc ctg cgc aag tac
                                                                      110
         Lys Arg Leu Phe Lys Clu Leu Lys Phe Ser Leu Arg Lys Tyr
tet ggt ggc ggt ggc teg ggc gga ggt ggg teg ggt ggc gga tec
                                                                      158
Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser
15
gac gtg aag ctt gtg gag tct ggg gga ggc tta gtg aac cct gga ggg
                                                                      206
Asp Val Lys Leu Val Glu Ser Gly Gly Gly Leu Val Asn Pro Gly Gly
                35
tee etg aaa ete tee tgt gea gee tet gga tte aet tte agt age tat
                                                                      254
Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            50
                                                                      302
acc atg tot tgg gtt cgc cag act ccg gag aag agg ctg gag tgg gtc
Thr Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
gca tcc att agt agt ggt act tac acc tac tat cca gac agt gtg
                                                                      350
Ala Ser Ile Ser Ser Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val
                                             90
aag ggc cga ttc acc atc tcc aga gac aat gcc aag aac acc ctg tac
                                                                      398
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr
                     100
95
ctg caa atg acc agt ctg aag tct gag gac aca gcc atg tat tac tgt
                                                                      446
Leu Gln Met Thr Ser Leu Lys Ser Glu Asp Thr Ala Met Tyr Tyr Cys
                 115
tca aga gat gac ggc tcc tac ggc tcc tat tac tat gct atg gac tac
                                                                      494
Ser Arg Asp Asp Gly Ser Tyr Gly Ser Tyr Tyr Tyr Ala Met Asp Tyr
                                 135
             130
                                                                      533
 tgg ggt caa gga acc tca gtc acc gtc tct tca gct agc
 Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Ser
                             150
 <210> 6
 <211> 14
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Synthesized using squential PCR techniques
```

<400> 6

Lys Arg Leu Phe Lys Glu Leu Lys Phe Ser Leu Arg Lys Tyr

<210> 7

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthesized using squential PCR techniques

<400> 7

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser

<210> 8

<211> 125 <212> PRT

<213> Artificial Sequence

<223> Synthesized using squential PCR techniques

<400> 8

Asp Val Lys Leu Val Glu Ser Gly Gly Gly Leu Val Asn Pro Gly Gly

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr

Thr Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val

Ala Ser Ile Ser Ser Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val 55

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr

Leu Gln Met Thr Ser Leu Lys Ser Glu Asp Thr Ala Met Tyr Tyr Cys 90

Ser Arg Asp Asp Gly Ser Tyr Gly Ser Tyr Tyr Tyr Ala Met Asp Tyr 100

Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Ser

```
<210> 9
<211> 89
<212> DNA
<213> Artificial Sequence
<220>
<223> Primer 986
<400> 9
caccactege acagaggata ctetggtgge ggtggetegg geggaggtgg gtegggtgge
ggcggatccg acgtgaagct tgtggagtc
                                                                      89
<210> 10
<211> 84
<212> DNA
<213> Artificial Sequence
<220>
<223> Primer 987
<400> 10
ggtgtccagt gtgatagcca cgctaagcgg caccacggat ataagcggaa gttccacgag
aagcaccact cgcacagagg atac
                                                                      84
<210> 11
<211> 74
<212> DNA
<213> Artificial Sequence
<220>
<223> Primer 988
<400> 11
gatatecace atggaetteg ggttgagett ggtttteett gteettaett taaaaggtgt
                                                                      50
ccagtgtgat agcc
<210> 12
<211> 87
<212> DNA
<213> Artificial Sequence
<220>
<223> Primer 989
<400> 12
gttcagcctg cgcaagtact ctggtggcgg tggctcgggc ggaggtgggt cgggtggcgg
cggatccgac gtgaagcttg tggagtc
                                                                     87
<210> 13
<211> 69
<212> DNA
```

<213> Artificial Sequence

. . .

<220>		
<223>	Primer 990	
<400>	13	
gtcctt	actt taaaaggtgt ccagtgtaag cggctgttta aggagctcaa gttcagcctg	6
cgcaag	tac	6
<210>	14	
<211>	65	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Primer 991	
<400>	14	
ggatat	ccac catggactte gggttgaget tggtttteet tgteettact ttaaaaggtg	6
tccag		6
<210>	15	
	39	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Primer 452	
<400>	15	